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FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS



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CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
JAN. 1, 1971

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



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WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

JANUARY 8, 1971

Issued by

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Report prepared by

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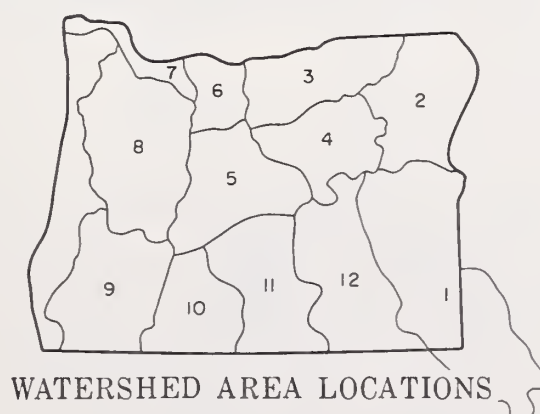
and

HOWARD M. VANCE, Assistant Snow Survey Supervisor

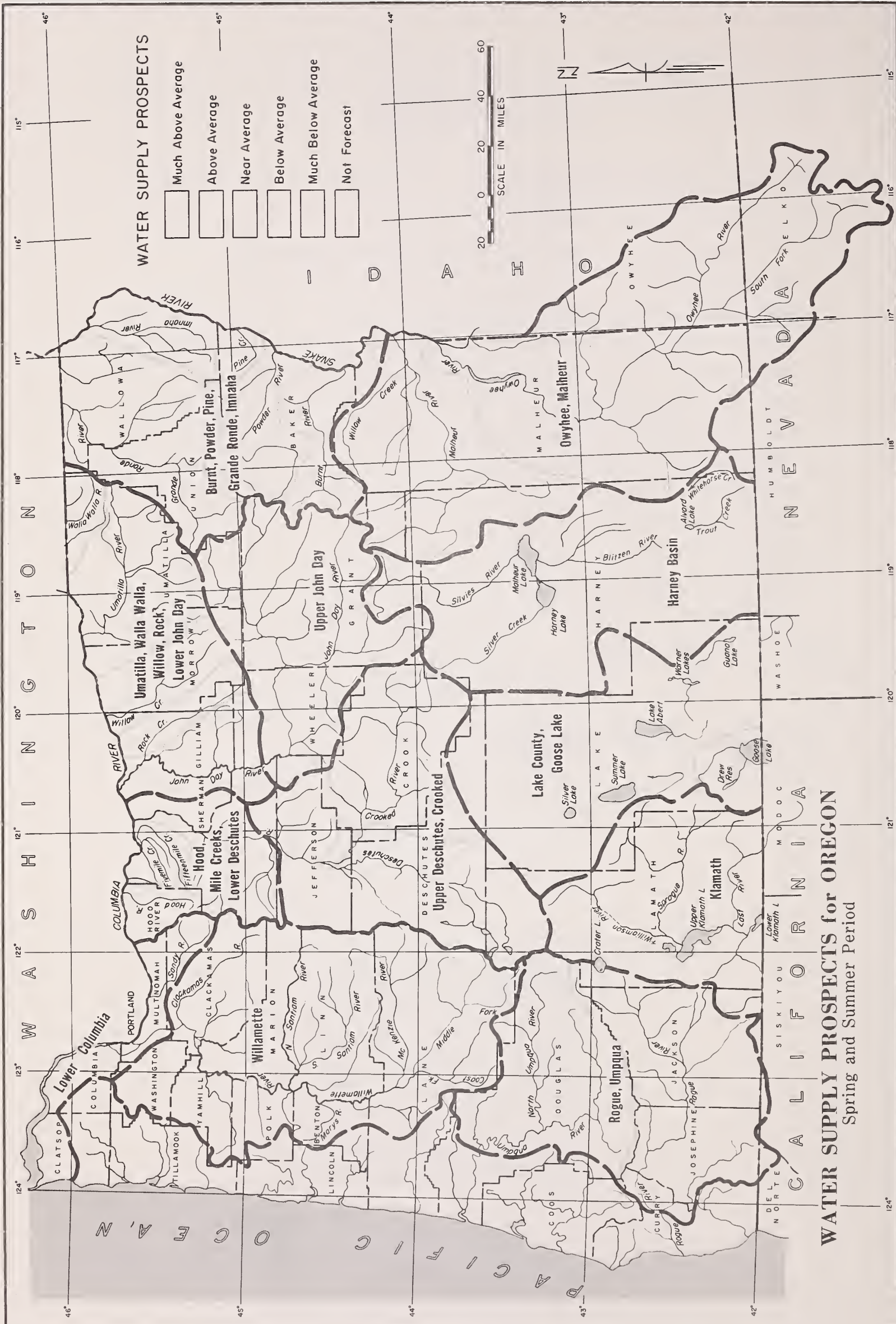
SOIL CONSERVATION SERVICE
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PORTLAND, OREGON 97205

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WATERSHED AREA LOCATIONS



WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1971

Prospects are excellent for good water supplies next summer for most of Oregon's water users. An exceptionally heavy snowpack for January 1 has been measured in the mountains. Reservoir storage is above average and is the best for this time of year since 1965, the flood year. These stored supplies, in combination with the good summer streamflow that should result from the melting snow, will provide adequate water for Oregon in 1971.

SNOW COVER

Below average temperatures and excellent precipitation during October, November, and December, have combined to produce a mountain snow cover ranging from 125 percent to 200 percent of average. The only exception is on the Grande Ronde watershed where the snowpack is 110 percent of average. Snowpacks which are near double the average amounts exist in Malheur, Harney, and Lake Counties. The snow cover in the Oregon Cascades is 150 to 200 percent of average. Many snow courses recorded amounts greater than any year since the early 1950's.

SOIL MOISTURE

Soil moisture is above average. The rains received in October and November brought good soil conditions for runoff to mountain watersheds. With soils wetter than usual more water from the melting snow will be available for runoff.

PRECIPITATION

Fall precipitation was excellent. Rains started early in September and came in generous amounts ranging from near average to 170 percent of average. The rainfall pattern continued strong on into November with all areas of the state recording above average amounts at this time. Rains slacked off some in December to near normal in most of the state. Umatilla County was an exception, receiving only half of the usual December rainfall.

continued on next page

continued--

RESERVOIR STORAGE

Stored water supplies are very good for this time of year. Oregon reservoirs currently contain 26 percent more than usual amounts. This is 15 percent better than last year. These water supplies, in addition to the snowmelt runoff yet to come in the spring, will provide good to excellent supplies to Oregon water users.

STREAMFLOW

Because of the excellent rainfall received this fall and up to January 1 streamflow has been good so far this winter. Most Oregon streams and rivers are currently flowing near normal to above average amounts.

Representative stations are as follows:

<u>STREAM</u>	<u>OCT-DEC STREAMFLOW</u> <u>As % of Average</u>
Owyhee Net Inflow	191
Umatilla at Pendleton	79
John Day at Service Creek	103
Deschutes at Moody	91
Grande Ronde at La Grande	106
Willamette, Mid. Fk. nr. Oakridge	102
Umpqua near Elkton	93
Rogue at Raygold	120
Upper Klamath Lake net Inflow	98

* This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, NOAA National Weather Service, and other cooperators.



WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

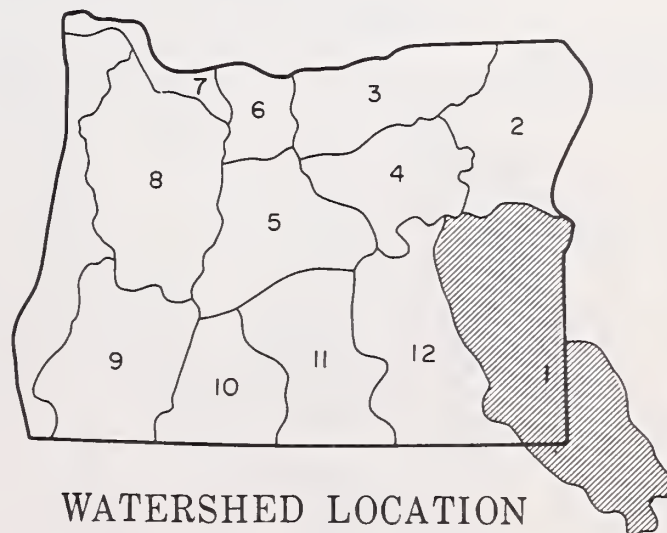
GENERAL OUTLOOK

PROSPECTS ARE FOR AN EXCELLENT WATER SUPPLY DURING THE 1971 SEASON. THE MOUNTAIN SNOWPACK IS 200 TO 248 PERCENT OF AVERAGE. DECEMBER PRECIPITATION WAS 134 PERCENT OF AVERAGE AND 137 PERCENT FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE RANGES FROM 78 PERCENT OF AVERAGE ON THE OWYHEE DRAINAGE TO 109 PERCENT OF AVERAGE ON THE JORDAN CREEK DRAINAGE. THE OWYHEE RESERVOIR NET INFLOW WAS 191 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD. RESERVOIR STORAGE WAS MUCH ABOVE AVERAGE ON JANUARY 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	
Bully Creek		
Cow Creek		
Jordan Creek		
Jordan Valley Irrig. Dist.		
McDermitt Creek		
Oregon Canyon Creek		
Owyhee Project		
Succor Creek		
Tenmile Creek		
Vale-Oregon Irrig. Dist.		
Warmsprings Irrig. Dist.		
Willow Creek (Reservoired)		



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Jordan Creek above Lone Tree Creek	c				
Malheur near Drewsey	c				
Malheur, North Fork at Beulah ^d	c				
Owyhee Reservoir net Inflow ^k	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome		Forecasts begin in the February 1 report which will be issued about February 10, 1971.	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Agency Valley	60.0	21.0	13.5	17.4
Antelope	55.0	20.5	3.2	4.0
Bully Creek	30.0	13.9	8.0	--
Owyhee	715.0	582.0	468.9	330.8
Warm Springs	191.0	125.9	71.4	62.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Jordan Creek	1	--	109
Malheur River	1	161	107
Owyhee River	2	105	78

SUMMARY of SNOW MEASUREMENTS

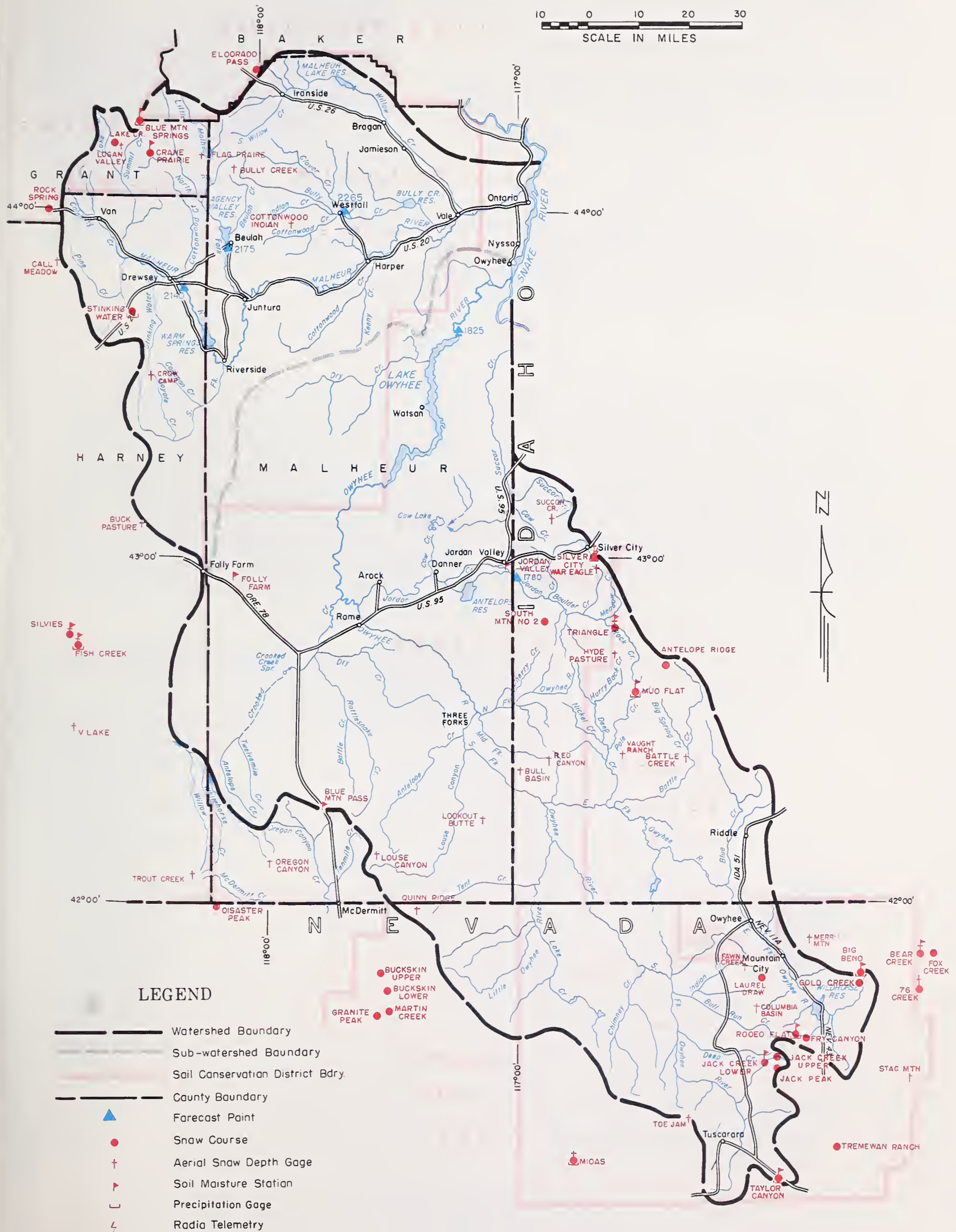
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Jordan Creek	2	222	248
Malheur River	4	173	213
Owyhee River	3	161	199

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS

10 0 10 20 30
SCALE IN MILES



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

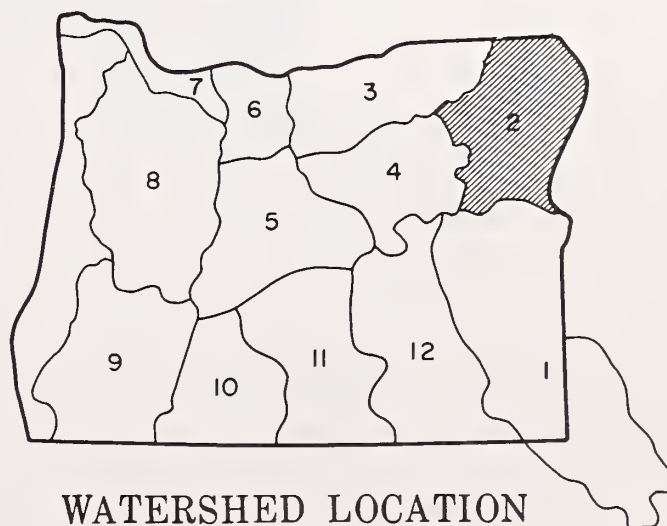
AN EXCELLENT WATER SUPPLY IS IN PROSPECT ON THE POWDER AND BURNT RIVER DRAINAGES AND AVERAGE ON THE GRANDE RONDE DRAINAGE. THE MOUNTAIN SNOWPACK WAS 187 AND 162 PERCENT OF AVERAGE ON THE BURNT AND POWDER RIVER DRAINAGES RESPECTIVELY. THE UPPER GRANDE RONDE SNOWPACK IS 107 PERCENT OF THE JANUARY 1 AVERAGE. PRECIPITATION FOR DECEMBER WAS 52 PERCENT OF NORMAL AND 169 PERCENT OF NORMAL FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE IS AVERAGE. THE GRANDE RONDE AT LaGRANDE FLOWED 106 PERCENT OF AVERAGE DURING THE OCTOBER TO DECEMBER PERIOD. UNITY RESERVOIR AND WALLOWA LAKE WERE HOLDING NEAR AVERAGE AMOUNTS OF WATER ON JANUARY 1. THIEF VALLEY RESERVOIR WAS FILLED TO CAPACITY.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope		
Baker Valley		
Big Creek		
Clover Cr. (nr. N. Powder)		
Cove		
Durkee		
Eagle Valley		
Elgin		
Enterprise-Joseph		
Hereford-Bridgeport		
Imnaha River		
La Grande-Island City		
Lostine-Wallowa		
No. Powder River-Wolf Cr.		
Pine Valley		
Powder River-Elk Creek		
Summerville		
Sumpter Valley		
Union-Hot Lake		
Unity		

Forecasts begin in the February 1 report which will be issued about February 10, 1971.



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Bear near Wallowa	c				
Burnt near Hereford ^d	c				
Catherine near Union	c				
Eagle Creek above Skull Creek	c				
Grande Ronde at La Grande	c				
Hurricane near Joseph	c				
Imnaha at Imnaha	c				
Lostine near Lostine	c				
Powder near Baker	c				
Wallowa, East Fork near Joseph ^d	c				

NOTE: FORECASTS BEGIN ON FEB. 1, 1971.

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Burnt, Powder	1	168	113
Grande Ronde, Catherine Creek, Imnaha River	2	99	115

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Thief Valley	17.4	17.4	13.8	--
Unity	25.2	8.9	8.0	6.5
Wallowa Lake	37.5	17.9	10.4	20.5
Phillips Lake	73.5	53.8	26.9	--

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

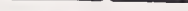








RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Burnt River	3	178	187
Grande Ronde River above La Grande	4	190	107
Powder River	2	186	162
Wallowa, Imnaha, Catherine Creek	--	--	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE,
IMNAHA WATERSHEDS



LEGEND

-
-  Watershed Boundary
 Sub-watershed Boundary
 Soil Conservation District Boundary
 County Boundary
 Forecast Point
 Snow Course
 Soil Moisture Station
 Aerial Snow Depth Gage
 Precipitation Gage



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

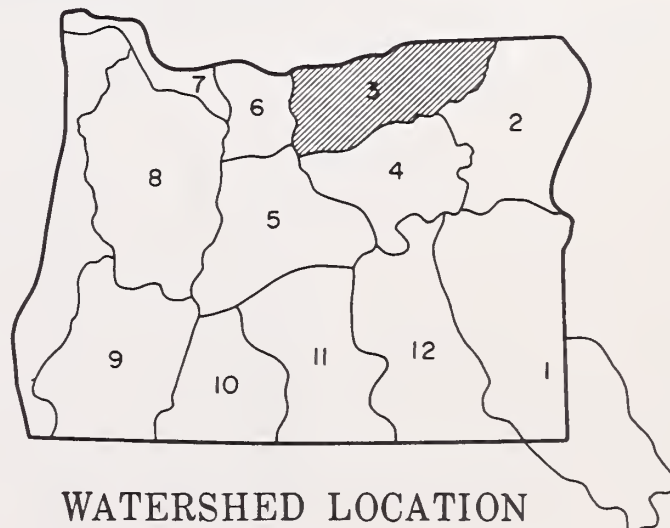
WATER SUPPLY PROSPECTS ARE ABOVE AVERAGE FOR THE AREA. THE SNOWPACK ON THE WATERSHED RANGED FROM 125 TO 138 PERCENT OF AVERAGE. THE PRECIPITATION FOR DECEMBER WAS 52 PERCENT OF AVERAGE AND 124 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. SOIL MOISTURE IS NEAR AVERAGE FOR JANUARY 1. THE FLOW OF THE UMATILLA ABOVE PENDLETON WAS 79 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD. STORAGE IS ABOVE THE JANUARY 1 AVERAGE FOR BOTH COLD SPRINGS AND MCKAY RESERVOIRS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fk.		
Walla Walla River, So. Fk.		
Walla Walla River, Main		
Walla Walla River, Little		
Couse Creek		
Dry Creek		
Pine Creek		
Umatilla River, Main		
Wildhorse Creek		
Umatilla R. (Cold Springs Reservoir)		
Umatilla River (McKay Res.)		
McKay Creek		
Birch Creek		
Butter Creek		
Willow Creek		
Rhea Creek		
Rock Creek (John Day tributary)		

Forecasts begin in the February 1 report which will be issued about February 10, 1971.



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	Last Year	Average ⁱ
Butter Creek near Pine City	c			
McKay near Pilot Rock	c			
Umatilla near Gibbon	c			
Umatilla at Pendleton	c			
Walla Walla, North Fork near Milton	c			
Walla Walla, South Fork near Milton	c			
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.				

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton		Forecasts begin in the February 1 report which will be issued about February 10, 1971.	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cold Springs	50.0	25.8	12.3	20.2
McKay	73.8	22.1	28.3	16.1

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Umatilla, Walla Walla, McKay Creek	3	101	101

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
McKay Creek	3	286	136
Umatilla River	3	151	125
Walla Walla River	2	131	138

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- ⌈ Precipitation Gage



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

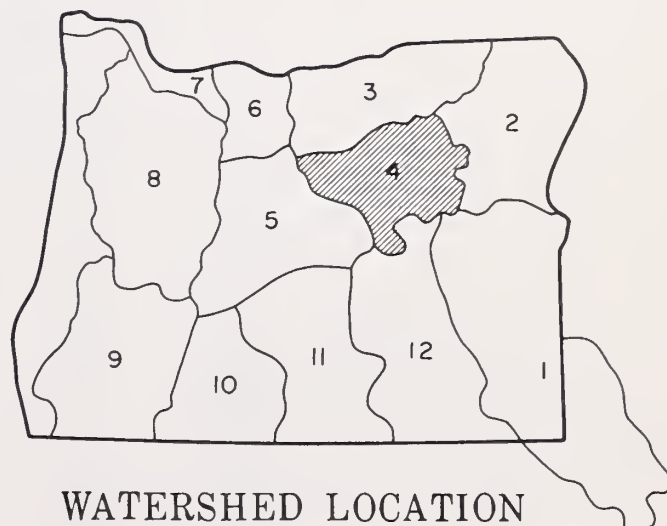
GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE AGAIN IN PROSPECT FOR THE JOHN DAY BASIN DURING THE 1971 SEASON. THE MOUNTAIN SNOWPACK IS 167 PERCENT OF AVERAGE ON THE NORTH FORK OF THE JOHN DAY AND 179 PERCENT OF AVERAGE ON THE JOHN DAY ABOVE DAYVILLE. PRECIPITATION DURING DECEMBER WAS 84 PERCENT OF AVERAGE AND 164 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. WATERSHED SOILS ARE HOLDING SLIGHTLY ABOVE AVERAGE AMOUNTS OF WATER. THE FLOW OF THE JOHN DAY AT SERVICE CREEK WAS 103 PERCENT OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



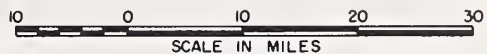
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1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
John Day at Prairie City	c				
John Day, Middle Fork at Ritter	c	NOTE: FORECASTS BEGIN ON FEB. 1, 1971.			
Strawberry near Prairie City	c				










[illegible][illegible]

OR-4b

UPPER JOHN DAY WATERSHEDS



LEGEND

- | | |
|---|----------------------------------|
|  | Watershed Boundary |
|  | Sub-watershed Boundary |
|  | Soil Conservation District Bdry. |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Soil Moisture Station |
|  | Aerial Snow Depth Gage |
|  | Precipitation Gage |

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of
JANUARY 1, 1971



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

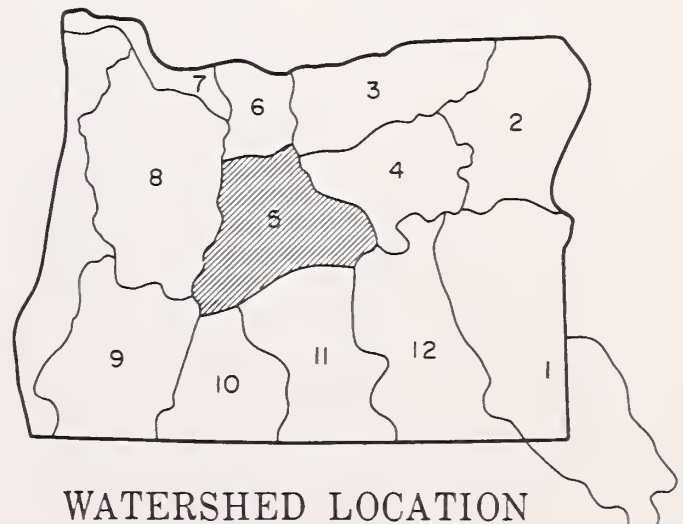
GENERAL OUTLOOK

WATER SUPPLIES IN THE CROOKED WATERSHEDS WILL BE EXCELLENT DURING THE 1971 SEASON. THE DESCHUTES RIVER DRAINAGES WILL HAVE AVERAGE TO SLIGHTLY BELOW AVERAGE WATER SUPPLIES. THE SNOWPACK RANGES FROM 161 PERCENT OF AVERAGE ON THE LITTLE DESCHUTES TO 254 PERCENT OF AVERAGE ON THE CROOKED AND OCHOCO DRAINAGES. PRECIPITATION DURING DECEMBER WAS 103 PERCENT OF AVERAGE AND 232 PERCENT FOR NOVEMBER. WATERSHED SOILS ARE WELL WETTED. THE OCTOBER TO DECEMBER FLOW OF THE DESCHUTES AT MOODY WAS 91 PERCENT OF AVERAGE. RESERVOIRS ON THE OCHOCO, CROOKED DRAINAGES WERE HOLDING 93 PERCENT OF NORMAL. THE UPPER DESCHUTES RESERVOIRS WERE HOLDING 53 PERCENT OF AVERAGE ON JANUARY 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District		
Bear Creek		
Beaver Creek		
Camp Creek		
Central Ore. Irrig. Dist.		
Crooked River		
Deschutes River		
Hay-Trout Creeks		
Lone Pine Irrig. Dist.		
Mill Creek		
North Unit Irrig. Dist.		
Ochoco Creek		
Sisters Irrigation Dist.		
Snow Creek Irrigation Dist.		
Squaw Creek Irrig. Dist.		
Swalley Ditch		
Tumalo Project		
Walker Basin Irrig. Dist.		
	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i
Crane Prairie Reservoir total Inflow	c				
Crescent at Crescent Lake ^d	c				
Crooked near Post	c				
Deschutes at Benham Falls ^d	c				
Deschutes below Snow Creek	c				
Deschutes, Little near Lapine ^d	c				
Ochoco Reservoir net Inflow	c				
Odell near Crescent	c				
Squaw near Sisters	c				
Tumalo near Bend ^d	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Deschutes at Bend			
Little Deschutes near La Pine			
Crane Prairie net Inflow			
Forecasts begin in the February 1 report which will be issued about February 10, 1971.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average i
Crane Prairie	55.3	37.9	32.4	40.2
Crescent Lake	86.9	34.8	32.2	44.3
Ochoco	47.5	23.5	17.9	19.2
Prineville	153.0	91.0	97.8	103.5
Wickiup	200.0	94.2	111.3	134.6

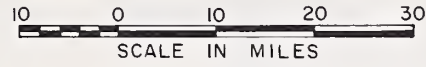
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Crooked, Ochoco	1	471	254
Deschutes abv. Wickiup	1	233	184
Little Deschutes	2	230	161
Tumalo & Squaw Crs.	2	254	189

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⬮ Soil Moisture Station
- ⌈ Precipitation Gage
- ⚡ Radio Telemetry
- ⌋ Temperature Gage





WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

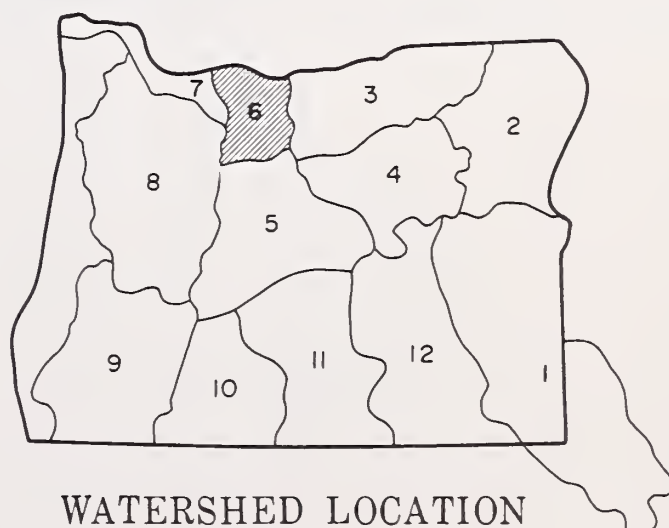
GENERAL OUTLOOK

ABOVE AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR THE 1971 SEASON FOR THIS AREA. THE SNOWPACK ON MT. HOOD RANGES FROM 140 PERCENT ON THE WHITE RIVER DRAINAGES TO 150 PERCENT OF AVERAGE ON THE HOOD RIVER DRAINAGES. PRECIPITATION WAS 130 AND 90 PERCENT OF AVERAGE FOR NOVEMBER AND DECEMBER RESPECTIVELY. SOIL MOISTURE IS NEAR AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrigation Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Creeks Tygh Creek White River	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



WATERSHED LOCATION

STREAMFLOW FORECASTS		THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ	
Hood River near Hood River ^d	c					
Hood, West Fork near Dee	c					
White below Tygh Valley	c					
NOTE: FORECASTS BEGIN ON FEBRUARY 1, 1971.						

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow		Forecasts begin in the February 1 report which will be issued about February 10, 1971.	

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average i
Clear Lake (Wasco) *Reading 12/22/70.	11.9	4.2*	--	--

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <i>m</i>
Hood River, Mile Creeks	1	100	--

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average
Hood River	4	170	154
Mile Creeks	—	—	—
White River	3	157	140

OR-6b

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ┐ Soil Moisture Station
- └ Precipitation Gage
- 9 Temperature Gage
- ⚡ Radio Telemetry

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

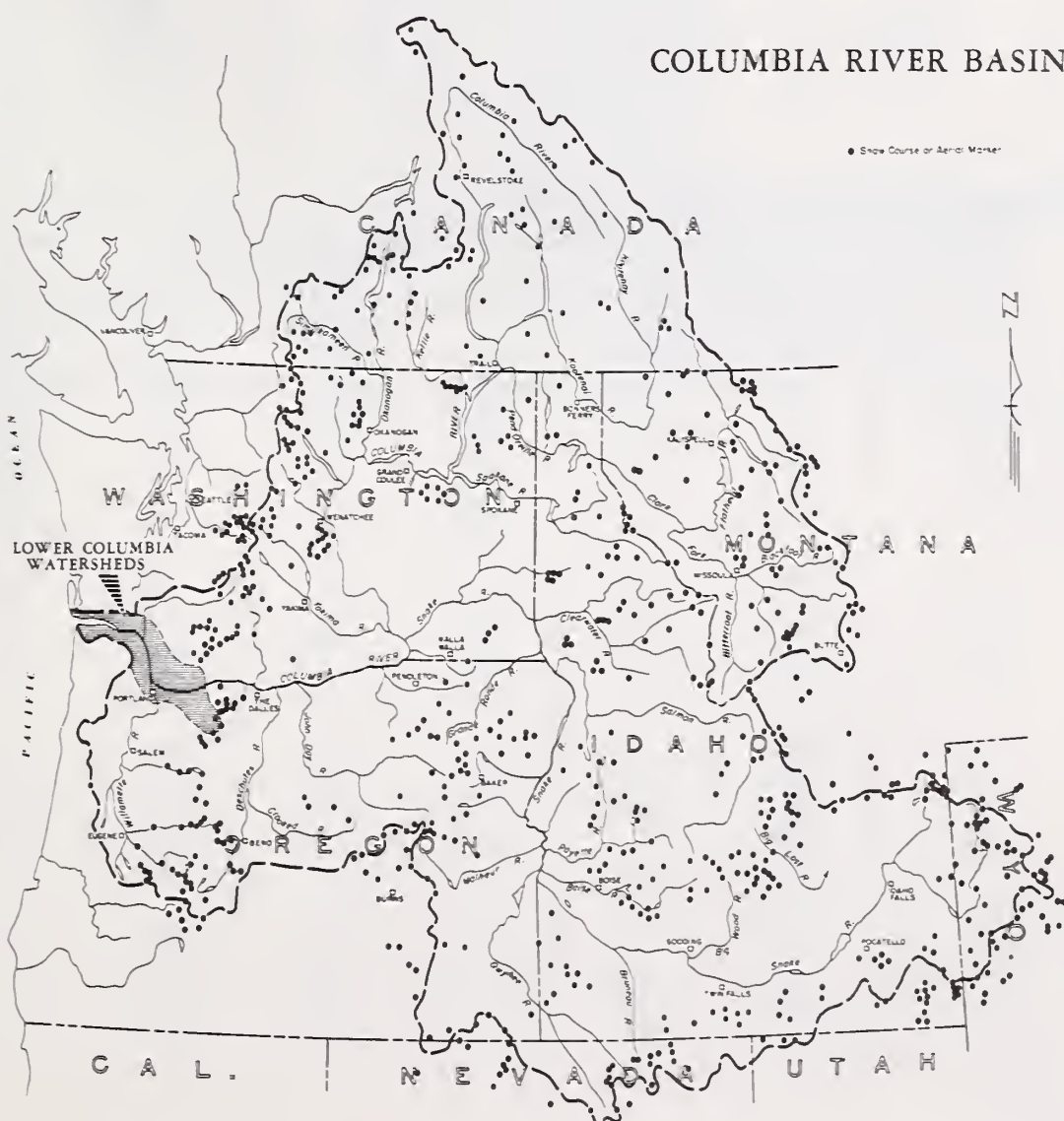
as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

AMPLE WATER SUPPLIES ARE FORECAST FOR THE COLUMBIA RIVER BASIN. THE SNOWPACK IS EXCELLENT AND IN GENERAL EQUALS THE FEBRUARY 1 AVERAGE AND IN SOME AREAS OF OREGON, SOUTHERN IDAHO, AND WASHINGTON EQUALS THE MARCH 1 AVERAGE. SOIL MOISTURE IS AVERAGE OR ABOVE EXCEPT IN THE UPPER BASIN IN CANADA WHERE IT IS CONSIDERABLY BELOW. RIVER STAGES ALONG THE LOWER COLUMBIA SHOULD BE ABOVE NORMAL DURING LATE SPRING AND EARLY SUMMER.



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SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Sandy River	2	157	135

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i
Columbia at The Dalles					

NOTE: FORECASTS BEGIN ON FEB. 1, 1971.

HISTORICAL DATA (Columbia River at The Dalles)

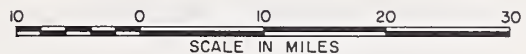
YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. — SEPT.	APR. — JUNE	MAY — JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- 50 River Miles
- Snow Course
- 9 Temperature
- ⚡ Radio Telemetry



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

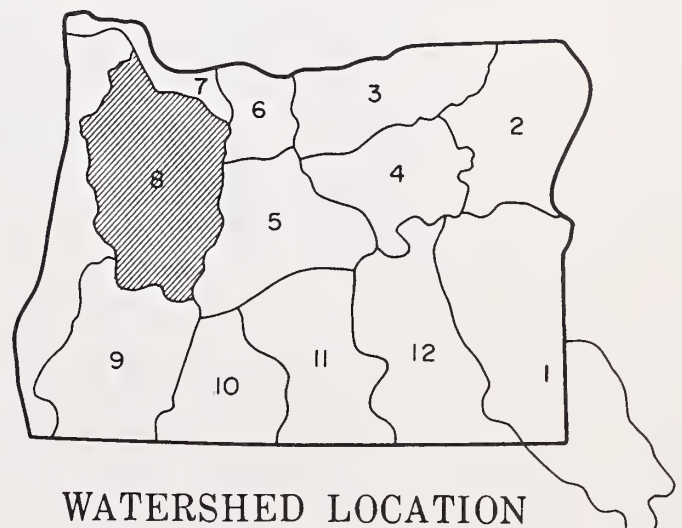
GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THE WILLAMETTE WATERSHEDS DURING THE 1971 SEASON. THE SNOWPACK RANGES FROM 141 PERCENT OF AVERAGE ON THE MCKENZIE RIVER TO 393 PERCENT OF AVERAGE ON THE ROW RIVER DRAINAGE. THIRTY INCHES OF WATER WERE MEASURED AT THE CHAMPION SNOW COURSE SETTING A JANUARY FIRST RECORD SINCE MEASUREMENTS WERE FIRST STARTED ON THIS DATE IN 1950. PRECIPITATION DURING DECEMBER WAS 112 PERCENT OF NORMAL AND 122 PERCENT OF AVERAGE FOR THE SEPTEMBER TO OCTOBER PERIOD. THE MIDDLE FORK OF THE WILLAMETTE RIVER BELOW THE NORTH FORK, FOR THE OCTOBER-DECEMBER PERIOD, FLOWED 102 PERCENT OF NORMAL. MULTIPURPOSE POWER RESERVOIRS ARE BEING HELD AT THEIR USUAL LOW LEVELS FOR THIS TIME OF YEAR.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya Clackamas McKenzie Molalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Clackamas at Big Bottom	c				
Clackamas at Estacada	c				
Clackamas above Three Lynx	c				
McKenzie at McKenzie Bridge ^d	c				
McKenzie near Vida ^d	c				
Oak Grove Fork above Power Intake	c				
Row near Dorena	c				
Santiam, North at Mehama ^d	c				
Santiam, South at Waterloo ^d	c				
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	c				
Willamette at Salem ^d	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Blue River	85.6*	2.1	- -	- -
Cottage Grove	30.0*	2.0	0.2	2.2
Cougar	155.2*	0.0	8.8	- -
Detroit	299.9*	0.8	13.1	40.2
Dorena	70.5*	4.0	2.7	9.1
Fall Creek	115.0*	0.0	0.0	- -
Fern Ridge	94.2*	9.9	0.1	14.5
Foster	30.0*	2.3	1.4	- -
Green Peter	270.0*	16.3	10.1	- -
Hills Creek	200.0*	2.7	0.0	183.2
Lookout Point	337.2*	7.1	56.3	75.2
Timothy Lake	61.7	47.0	41.5	46.4
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

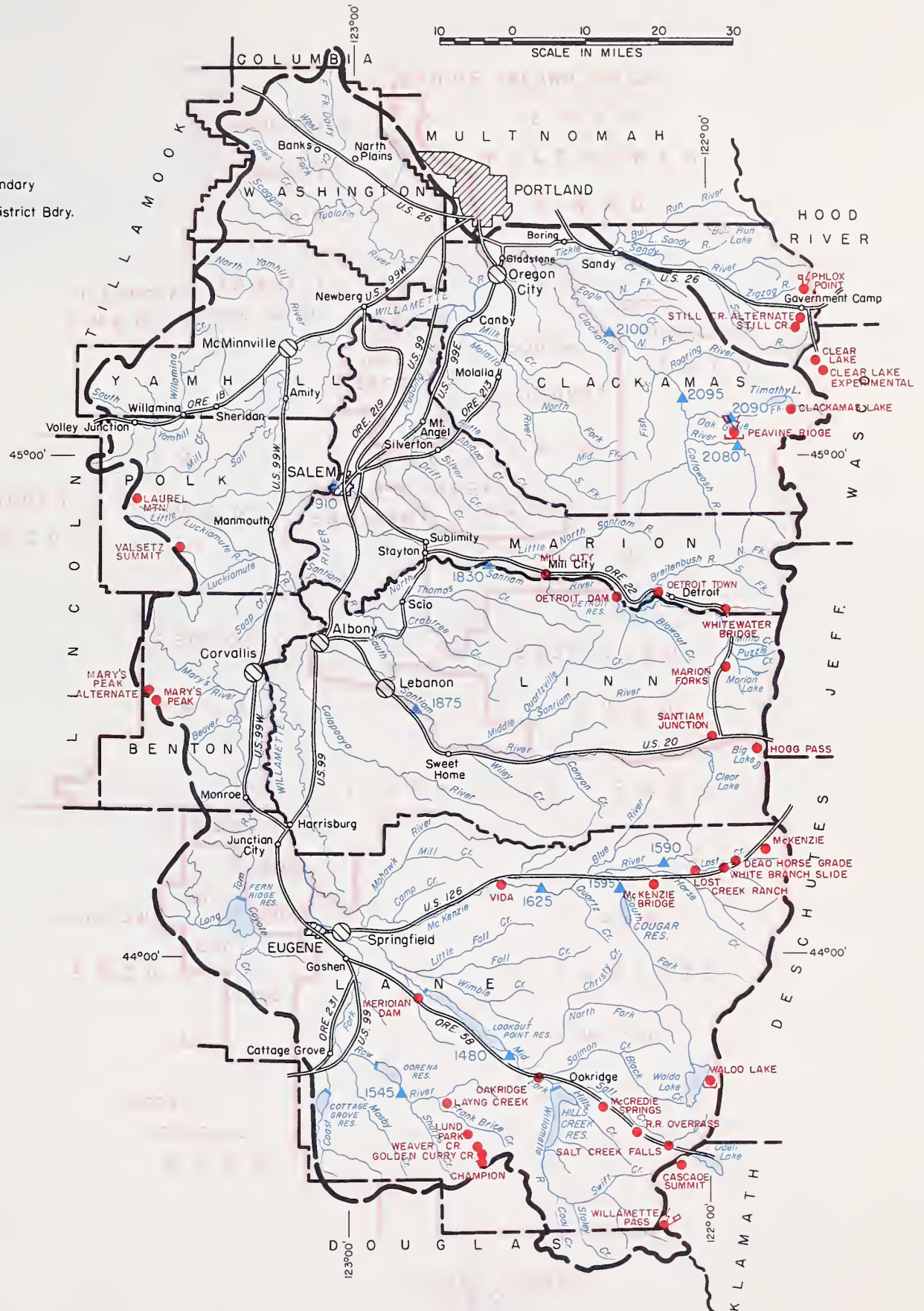
RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Clackamas River	1	156	192
McKenzie River	3	180	141
Row River	2	296	393
Santiam River	4	235	203
Willamette, Mid. Fk.	3	224	171

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Radio Telemetry
- L Precipitation Gage
- 9 Temperature Gage





WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

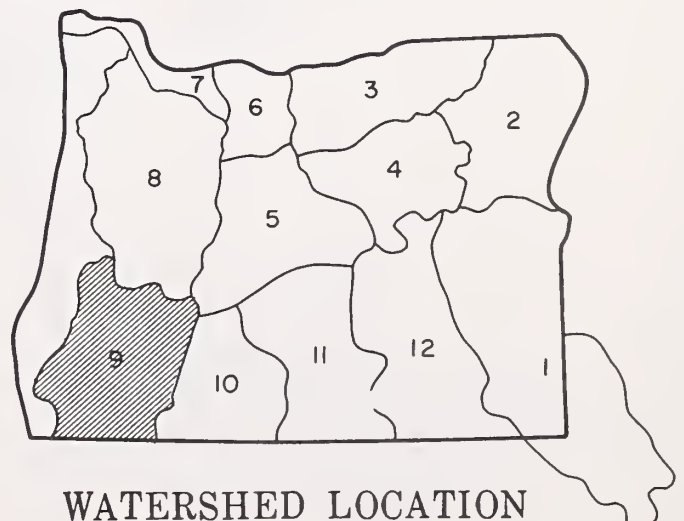
GENERAL OUTLOOK

PROSPECTS ARE FOR ABOVE AVERAGE TO EXCELLENT WATER SUPPLIES IN THE ROGUE-UMPQUA RIVER BASINS DURING 1971. THE SNOWPACK IS 115 PERCENT TO 160 PERCENT OF NORMAL FOR JANUARY FIRST ON THE ROGUE-UMPQUA DRAINAGES AND 475 PERCENT IN THE SISKIYOU. THIS IS 200 TO 500 PERCENT OF THE 1970 MEASUREMENTS FOR THE SAME PERIOD. PRECIPITATION DURING DECEMBER WAS 111 PERCENT OF AVERAGE AND 180 PERCENT OF AVERAGE FOR NOVEMBER. THE OCTOBER TO DECEMBER FLOW OF THE ROGUE AT RAYGOLD WAS 120 PERCENT OF AVERAGE AND THE UMPQUA NEAR ELKTON WAS 93 PERCENT OF NORMAL. JANUARY FIRST RESERVOIR STORAGE WAS 122 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grants Pass Irrig. Dist. Grave Creek Illinois River, East Fork Illinois River, West Fork Jump-off-Joe Creek Neil Creek Red Blanket Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek Williams Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



WATERSHED LOCATION

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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Applegate near Copper	c				
Clearwater above Trap Creek ^d	c				
Fourmile Lake net Inflow ^d	c				
Hyatt Reservoir net Inflow ^d	c				
Illinois River near Kerby	c				
Little Butte, N. Fk. at Fish Lake nr. Lake Cr. ^d	c				
Little Butte, S. Fk. near Lake Creek	c				
Rogue above Prospect	c				
Rogue, South Fork near Prospect ^d	c				
Rogue below South Fork	c				
Rogue at Raygold near Central Point	c				
Rogue at Grants Pass	c				
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Rogue at Raygold Little Butte Creek, South Fork		Forecasts begin in the February 1 report which will be issued about February 10, 1971.	

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Emigrant Lake	39.0	17.7	19.5	19.7*
Fish Lake	7.8	5.0	5.2	5.2
Fourmile Lake	16.1	6.2 ^b	9.0	8.8
Howard Prairie	60.0	46.2	42.3	32.8
Hyatt Prairie	16.1	12.6	11.6	9.2
*Average for years of record after reconstruction.				
^b Reading on 1/6/71				

SUMMARY of SNOW MEASUREMENTS

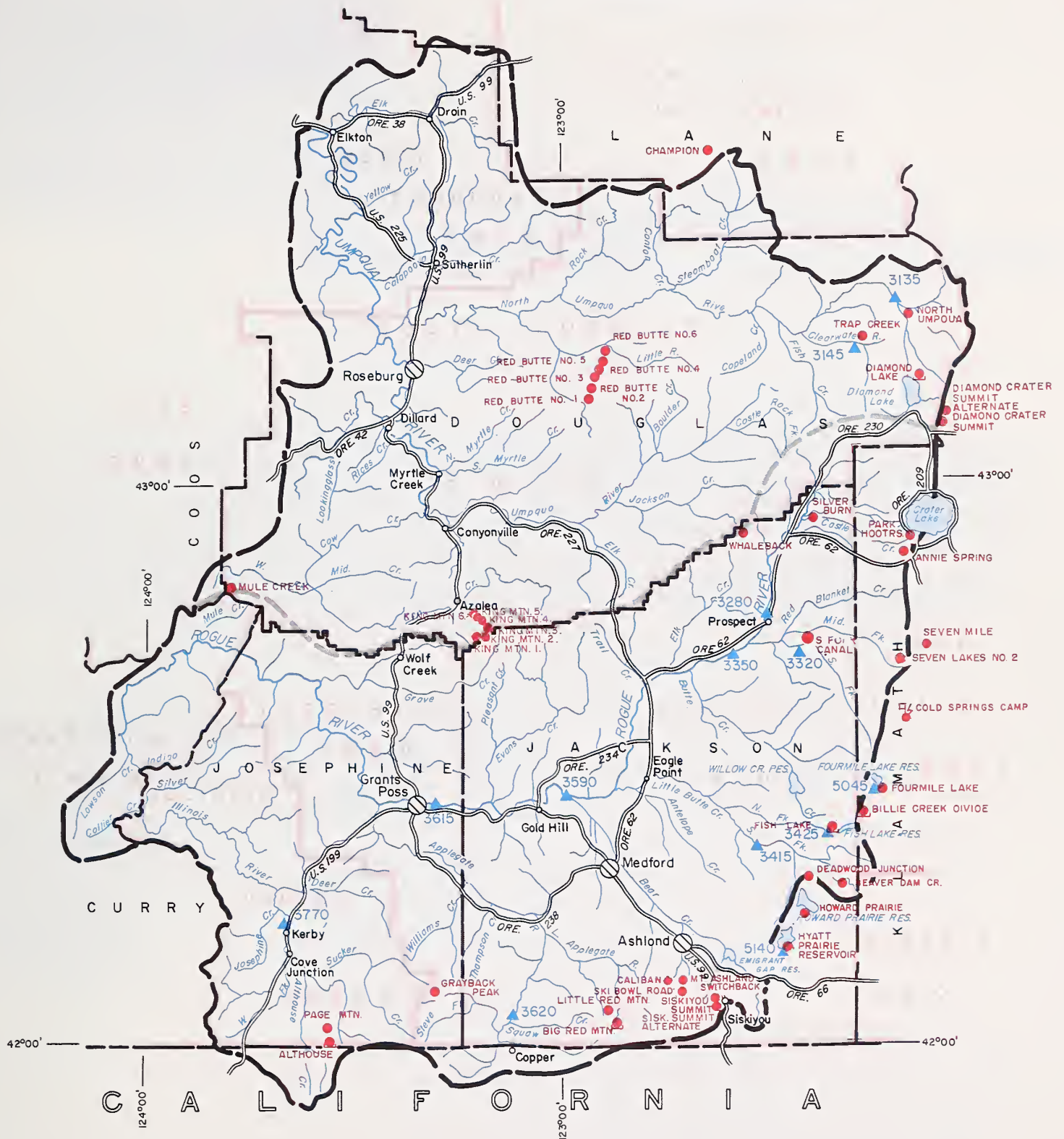
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Applegate	-	--	--
Bear Creek	1	518	475
Butte Creek	4	313	187
Illinois River	-	--	--
North Umpqua	2	189	115
Rogue River	3	226	160

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⌒ Precipitation Gage
- ⚡ Radio Telemetry
- 9 Temperature Gage

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

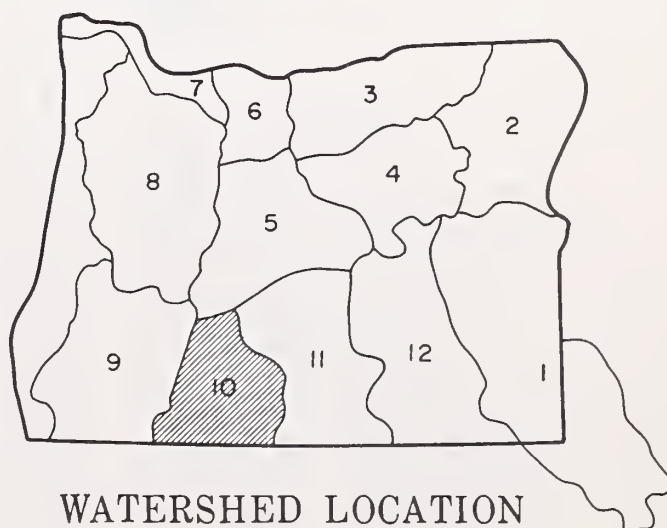
GENERAL OUTLOOK

THE 1971 WATER SUPPLY OUTLOOK FOR THE KLAMATH BASIN IS EXCELLENT. THE SNOWPACK RANGES FROM 151 PERCENT OF AVERAGE ON THE WILLIAMSON DRAINAGE TO 230 PERCENT ON THE SPRAGUE RIVER DRAINAGE, AND 250 TO 430 PERCENT RESPECTIVELY OF THE JANUARY FIRST READING IN 1970. SOIL MOISTURE IS NEAR AVERAGE. PRECIPITATION DURING DECEMBER WAS 91 PERCENT OF NORMAL AND 213 PERCENT OF NORMAL FOR NOVEMBER. THE NET INFLOW TO KLAMATH LAKE FOR THE OCTOBER TO DECEMBER PERIOD WAS 98 PERCENT OF AVERAGE. RESERVOIR STORAGE IS SLIGHTLY ABOVE AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



WATERSHED LOCATION

Report prepared by
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1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Clear Lake Reservoir Inflow ^k	c				
Gerber Reservoir Inflow ^k	c				
Sprague near Chiloquin	c				
Upper Klamath Lake net Inflow ^k	c				
Williamson below Sprague River	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Upper Klamath	2	109	97

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Clear Lake	440.2	289.5	248.9	191.7
Gerber	94.0	58.9	66.3	36.4
Upper Klamath Lake	584.0	330.3	364.5	351.3

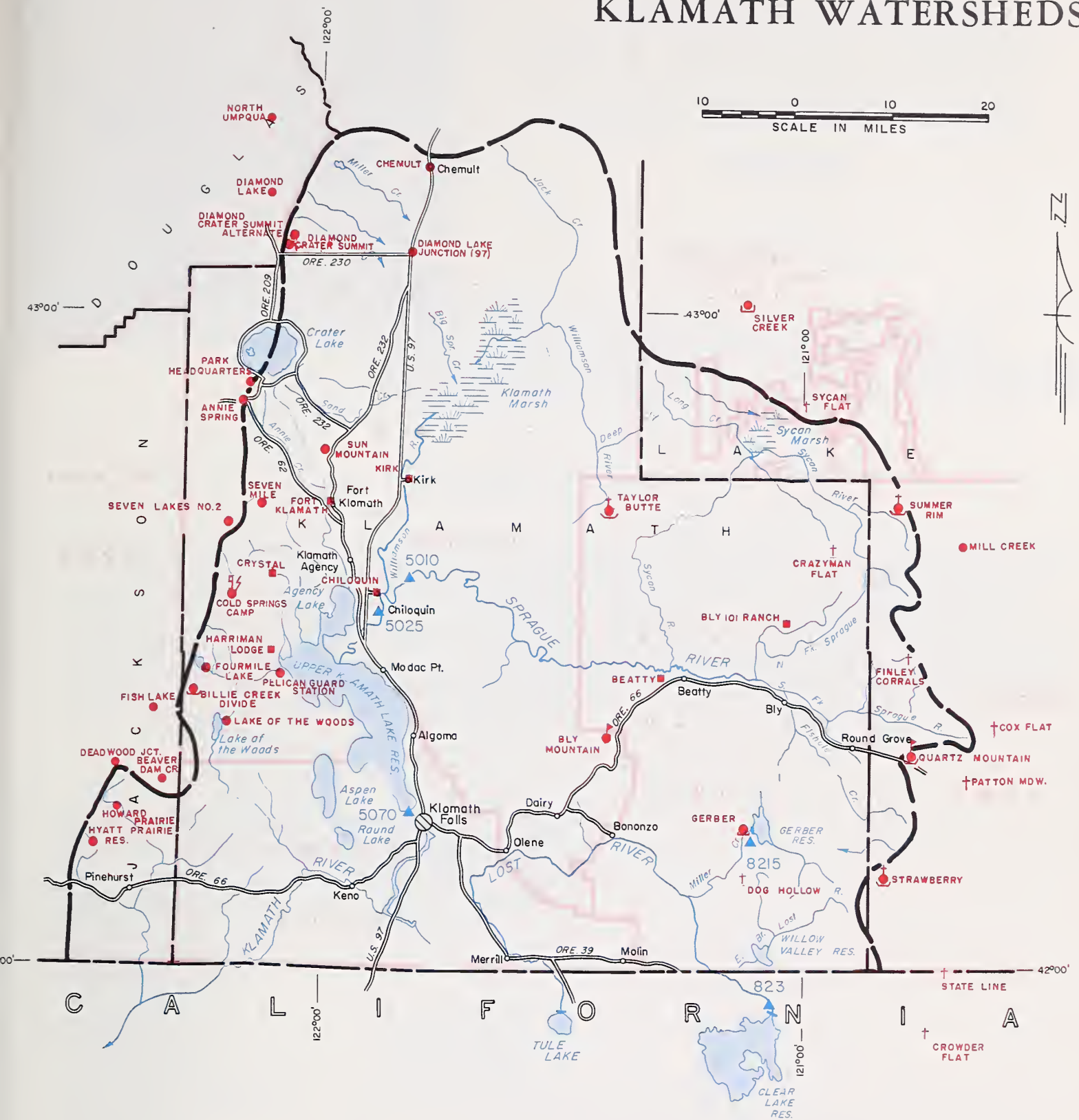
SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Lost River	1	120	164
Sprague River	2	433	237
Upper Klamath	7	273	158
Williamson River	3	254	151

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- - - - - Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- PP&L Snow Station
- ▲ Soil Moisture Station
- ▼ Precipitation Gage
- ⚡ Radio Telemetry
- ⌋ Temperature Gage



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

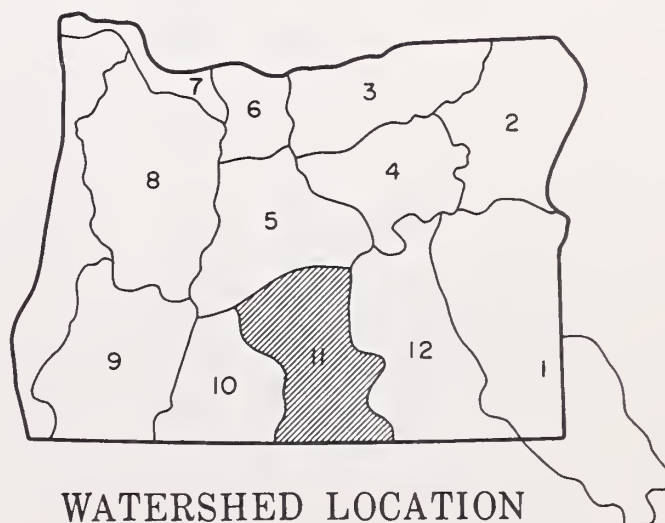
GENERAL OUTLOOK

EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THIS AREA. THE SNOWPACK IS 200 TO 250 PERCENT OF THE AVERAGE AND RANGES FROM 300 TO 400 PERCENT OF THAT MEASURED ON JANUARY FIRST IN 1970. THE TAYLOR BUTTE SNOW COURSE MEASURED 5.5 INCHES OF WATER. THIS WAS THE HIGHEST JANUARY 1 READING SINCE IT WAS FIRST MEASURED IN 1956. SOIL MOISTURE SUPPLIES ARE NEAR AVERAGE. THE DECEMBER PRECIPITATION WAS 98 PERCENT OF NORMAL BUT WATERSHEDS WERE PRIMED DURING NOVEMBER WHEN PRECIPITATION WAS 255 PERCENT OF AVERAGE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Chewaucan near Paisley	c				
Deep above Adel	c				
Drews Reservoir net Inflow ^d	c				
Honey Creek near Plush	c				
Silver Creek near Silver Lake	c				
Twentymile near Adel	c				
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.					

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Chewaucan, Silver Creek,			
Drew Creek	1	112	93
Honey, Deep, 20-mile Crs.	1	112	108

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cottonwood	8.7	3.0 ^c	2.9	2.1*
Drews	63.0	41.4 ^d	40.1	31.0
Thompson Valley	19.5	b	b	11.1
*Average for years of record after reconstruction.				
^c Reading 12/12/70				
^d Reading 1/5/71				

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Chewaucan River	2	433	236
Deep Creek	1	348	219
Drew Creek	1	326	204
Honey Creek	1	348	215
Silver Creek	2	478	253
Twentymile Creek	-	--	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- P P & L Snow Station
- ▤ Soil Moisture Station
- ┌ Precipitation Gage



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

JANUARY 1, 1971

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

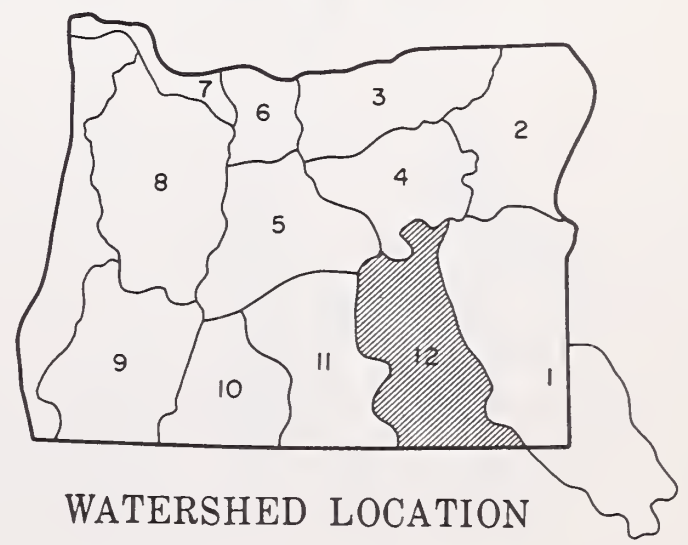
GENERAL OUTLOOK

THE EARLY SEASON SNOWPACK IS MUCH ABOVE AVERAGE AND EXCELLENT WATER SUPPLIES ARE IN PROSPECT FOR THIS AREA DURING THE 1971 IRRIGATION SEASON. SOIL MOISTURE IS 127 PERCENT OF AVERAGE. PRECIPITATION IN THE BASIN WAS 215 PERCENT OF AVERAGE DURING NOVEMBER AND 119 PERCENT OF AVERAGE DURING DECEMBER.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1971.	



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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	Last Year Average ⁱ
Donner und Blitzen near Frenchglen	c			
Silver near Riley	c			
Silvies River near Burns	c			
Trout Creek near Denio	c			
NOTE: FORECASTS BEGIN ON FEB. 1, 1971.				

SOIL MOISTURE

SUMMARY of SNOW MEASUREMENTS

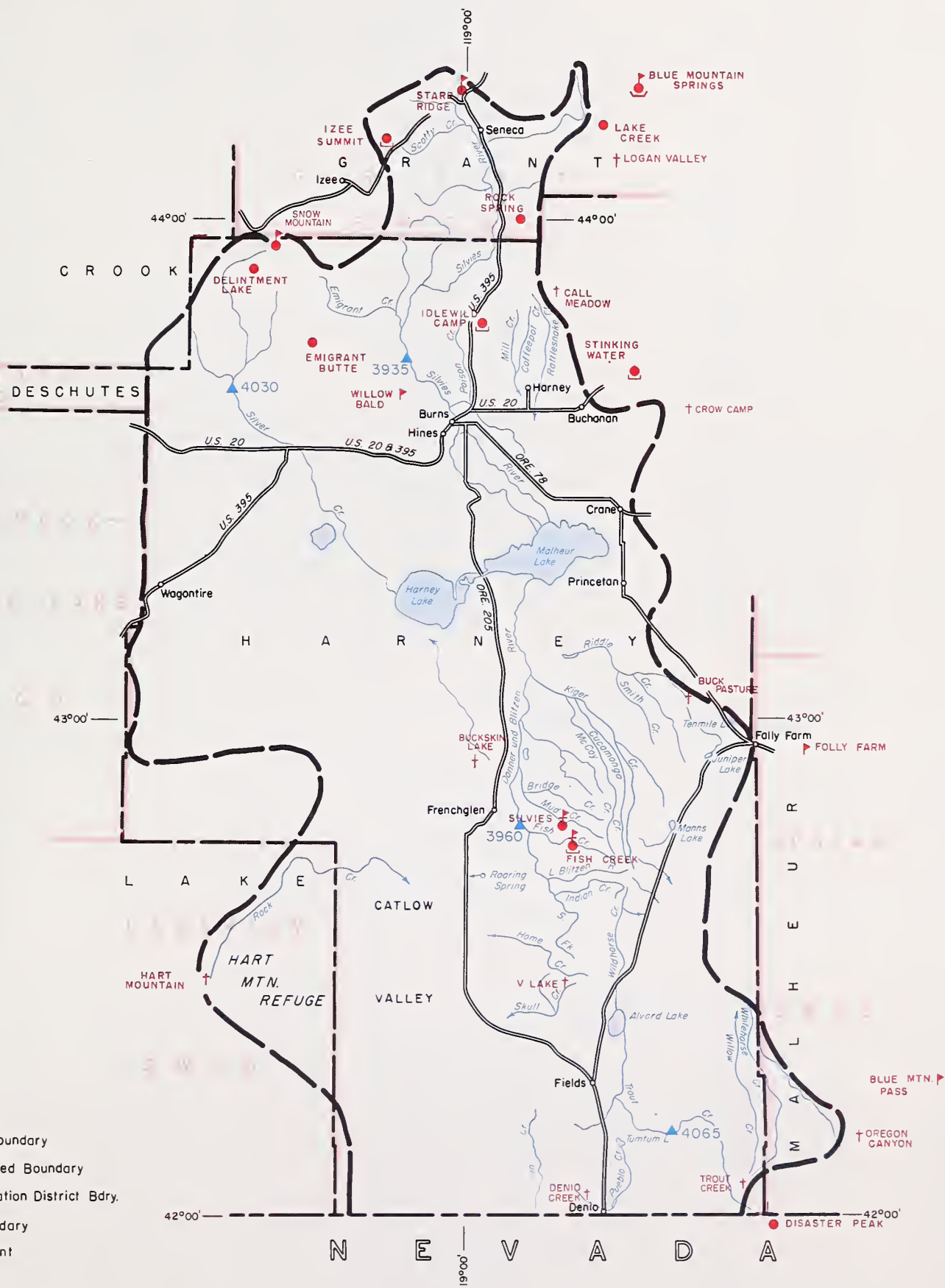
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^m			Last Year	Average ⁱ
Silvies River, Silver Cr.	2	141	127	Donner und Blitzen R.	1	364	308
				Silver Creek	-	--	--
				Silvies River	4	173	186
				Trout Creek	-	--	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- + Aerial Snow Depth Gage
- ▶ Soil Moisture Station
- └─┘ Precipitation Gage

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	c				
Battle Creek ^e (Ida.)	c				
Bear Creek ^e (Nev.)	b				
Big Bend (Nev.)	12/28	19	3.5	3.6	2.6 ^h
Blue Mountain Springs	12/29	47	10.2	5.8	5.6 ^h
Blue Mtn. Springs Pillow	12/30	29	5.3	-	-
Buck Pasture ^e	c				
Buckskin, Lower (Nev.)	c				
Buckskin, Upper (Nev.)	c				
Bull Basin ^e (Ida.)	c				
Bully Creek ^e	c				
Call Meadow	c				
Columbia Basin ^e (Nev.)	c				
Cottonwood-Indian ^e	c				
Crane Prairie	c				
Crow Camp ^e	c				
Disaster Peak (Nev.)	c				
Eldorado Pass	12/30	21	4.2	3.2	1.2 ^h
Fawn Creek ^e (Nev.)	c				
Fish Creek	c				
Flag Prairie ^e	c				
Fox Creek (Nev.)	c				
Fry Canyon (Nev.)	12/28	17	3.5	3.1	2.3 ^h
Gold Creek (Nev.)	12/28	12	2.0	1.5	1.6 ^h
Granite Peak (Nev.)	c				
Hyde Pasture ^e (Ida.)	c				
Jack Creek, Lower (Nev.)	c				
Jack Creek, Upper (Nev.)	c				
Jack Peak (Nev.)	c				
Lake Creek R. S.	12/31	32	7.2	3.7	3.6 ^h
Lake Creek (New Tangent)	c			3.9	-
Laurel Draw (Nev.)	c				
Logan Valley ^e	c				
Lookout Butte ^e	c				
Louse Canyon ^e	c				
Martin Creek (Nev.)	c				
Merritt Mountain ^e (Nev.)	c				
Midas ^e (Nev.)	c				
Mud Flat (Ida.)	c				
Oregon Canyon ^e	c				
Quinn Ridge ^e (Nev.)	c				
Red Canyon ^e (Ida.)	c				
Rock Spring	12/28	21	4.0	2.1	1.6
Rodeo Flat (Nev.)	12/28	10	2.5	2.5	2.4 ^h
76 Creek (Nev.)	c				
Silver City (Ida.)	1/4	39	11.1 ^e	4.9	4.9 ^h
Silvies	c				
South Mountain #2 (Ida.)	1/4	32	10.0	4.6	3.6 ^h
Stag Mountain ^e (Nev.)	c				
Stinking Water	12/30	19	4.0	1.1	1.3 ^h
Succor Creek ^e (Ida.)	c				
Taylor Canyon (Nev.)	12/28	13	2.6	2.3	1.6 ^h
Toe Jam ^e (Nev.)	c				
Tremewan Ranch (Nev.)	12/28	8	0.9	1.0	0.4 ^h
Triangle ^e (Ida.)	c				
Trout Creek ^e	c				
"V" Lake ^e	c				
Vaught Ranch ^e (Ida.)	c				
War Eagle ^e (Ida.)	c				

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1					
Aneroid Lake #2					
Anthony Lake	12/30	43	11.2	8.5	11.0
Bald Mountain ^e (Ore.)	c				
Beaver Reservoir	1/2	24	5.0	2.2	3.7 ^h
Beaver Reservoir (Alt.)	1/2	29	6.2	-	-
Big Sheep	c				
Blue Mountain Summit	12/30	25	5.6	3.3	2.9
Bourne	c				
County Line	12/31	12	2.0	1.0	2.2
Dooley Mountain	12/28	28	7.3	4.4	3.0
Eilertson Meadows	12/29	34	7.2	3.8	4.4
Eldorado Pass	12/30	21	4.2	3.2	1.2 ^h
Gold Center	c				
Goodrich Lake	1/4	79	24.6	12.8	-
Intake House	12/29	36	7.3	4.5	-
Little Alps	12/30	32	7.7	4.2	4.8 ^h
Little Antone	12/30	23	4.6	3.5	-
Lucky Strike	c				
Meacham	12/29	13	2.6	1.7	2.6 ^h
Mirror Lake ^e	c				
Moss Springs	c			6.7	9.0 ^h
Power Plant	12/29	23	4.3	3.8	-
Schneider Meadows	c				
Schoolmarm	12/31	11	1.4	0.9	1.8
Standley ^e	c				
Taylor Green	c				
Tipton	12/30	30	7.2	3.8	3.8
Tipton Snow Pillow	12/30	37	8.8	-	-
Tollgate	12/29	41	10.6	8.2	8.1 ^h
TV Ridge ^e	c				
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS					
Arbuckle Mountain	c				
Battle Mountain Summit	12/29	10	1.7	0.3	0.9 ^m
Blue Mountain Camp	12/29	21	5.4	4.0	3.5 ^m
Emigrant Springs	12/29	10	2.4	0.5	1.7 ^h
Lucky Strike	c				
Meacham	12/29	13	2.6	1.7	2.6 ^h
Tollgate	12/29	41	10.6	8.2	8.1 ^h
Weston Mountain	12/29	2	0.6	0.6	-
UPPER JOHN DAY WATERSHEDS					
Anthony Lake	12/30	43	11.2	8.5	11.0
Arbuckle Mountain	c				
Battle Mountain Summit	12/29	10	1.7	0.3	0.9 ^m
Beech Creek Summit	12/29	21	4.4	1.3	1.5 ^h
Blue Mountain Springs	12/29	47	10.2	5.8	5.6 ^h
Blue Mtn. Springs Pillow	12/30	29	5.3	-	-
Blue Mountain Summit	12/30	25	5.6	3.3	2.9
Derr	c				
East Fork Canyon ^e	c				
Gold Center	c				
Indian Creek Butte ^e	c				
Izee Summit	12/29	23	4.9	2.6	2.7 ^h
Lucky Strike	c				
Marks Creek	12/28	12	3.3	0.7	1.3 ^m
Ochoco Meadows	c				
Olive Lake	c				
Schoolmarm	12/31	11	1.4	0.9	1.8
(Continued - next page)					

(Continued - next page)

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i

UPPER JOHN DAY WATERSHEDS (Continued)

Snow Mountain	c				
Snow Mountain Pillow	c				
Starr Ridge	12/29	17	3.0	2.3	2.0 ^h
Tipton	12/30	30	7.2	3.8	3.8
Tipton Snow Pillow	12/30	37	8.8	-	-
Williams Ranch	c				

UPPER DESCHUTES, CROOKED WATERSHEDS

Black Pine Spring	c				
Caldwell Ranch	c				
Cascade Summit	12/30	62	16.6	8.0	10.3
Chemult	12/28	26	6.9	2.2	4.1
Deer Creek	c				
Derr	c				
Hogg Pass	12/30	86	22.7	13.5	13.9
Hungry Flat	12/31	27	6.5	1.4	-
Irish-Taylor	c				
Marks Creek	12/28	12	3.3	0.7	1.3 ^m
Mowich	c				
New Crescent Lake	c				
New Dutchman Flat #2	12/31	100	32.9	14.1	-
Ochoco Meadows	c				
Snow Mountain	c				
Snow Mountain Pillow	c				
Tamarack	c				
Tangent	12/31	65	18.3	6.8	-
Three Creek Butte	c				
Three Creek Meadow	c				
Three Creek Pillow	c				
Waldo Lake	c				
Willamette Pass	c				
Willamette Pass Pillow	1/1	-	27.3	12.2	-
Irish-Taylor Pillow	1/1	-	20.9	-	-

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

Brooks Meadows	c				
Clear Lake	12/22	23	5.0	3.2	2.6 ^h
Clear Lake (Experimental)	12/22	32	7.5	5.5	4.9 ^h
Cooper Spur	1/2	38	11.4	4.6	4.6 ^h
Cooper Spur (Alt.)	1/2	41	12.3	5.5	-
Greenpoint Reservoir	c				
Knebal Springs	c				
Parkdale	1/2	12	3.6	T	1.0 ^m
Phlox Point	12/23	80	26.7	17.2	20.8
Red Hill	c				
Still Creek	12/22	39	11.0	6.8	7.1
Still Creek (Alternate #2)	b				
Switchback	c				
Tilly Jane	c				
Ulrich Ranch Junction	c				
Umbrella Falls	12/28	103	29.8	17.7	-
Upper Valley	1/2	22	6.6	3.8	2.7 ^h

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i

WILLAMETTE WATERSHEDS

Cascade Summit	12/30	62	16.6	8.0	10.3
Cascade Summit Alternate	b				
Champion	12/31	74	30.0	9.7	7.7 ^h
Clackamas Lake	c				
Clear Lake	12/22	23	5.0	3.2	2.6 ^h
Clear Lake (Experimental)	12/22	32	7.5	5.5	4.9 ^h
Dead Horse Grade	12/31	26	7.4	4.0	6.5 ^h
Detroit Town	12/30	6	2.8	0.0	0.6
Detroit Dam	12/30	T	T	0.0	0.3
Golden Curry Creek	12/31	22	5.8	2.4	1.4 ^h
Hogg Pass	12/30	86	22.7	13.5	13.9
Lake Harriet	1/4	15	6.5	0.0	0.6 ^m
Laurel Mountain	c				
Layng Creek	12/31	0	0.0	0.0	0.1 ^h
Lost Creek Ranch	12/31	9	3.5	0.0	1.3 ^h
Lund Park	12/31	T	T	0.0	0.0 ^m
Marion Forks	12/30	40	10.8	2.0	4.0 ^h
Marys Peak	c				
Marys Peak (Alternate)	c				
McCredie Springs	12/30	T	T	0.0	0.1
McKenzie	12/31	64	22.8	13.1	17.9 ^h
McKenzie Bridge	12/31	0	0.0	0.0	0.5 ^h
Meridian Dam	12/30	0	0.0	0.0	0.0 ^h
Mill City	12/30	0	0.0	0.0	0.2
Oakridge	12/30	0	0.0	0.0	Th
Peavine Ridge	b			4.3	4.8 ^h
Peavine Ridge Pillow	b				
Phlox Point	12/23	80	26.7	17.2	20.8
Railroad Overpass	12/30	T	T	0.4	0.5 ^m
Salt Creek Falls	12/30	38	9.8	3.4	4.6
Santiam Junction	12/30	58	15.6	7.6	7.7 ^h
Still Creek	12/22	39	11.0	6.8	7.1
Still Creek Alternate #2	b				
Timothy Lake	1/4	43	13.2	4.8	4.0 ^m
Valsetz Summit	c				
Vida	12/31	0	0.0	0.0	0.2 ^h
Waldo Lake	c				
Weaver Creek	12/31	5	0.9	0.0	0.2 ^m
White Branch Slide	12/31	24	7.5	3.5	2.2 ^h
Whitewater Bridge	12/30	21	6.0	0.9	1.5 ^h
Willamette Pass	c				
Willamette Pass Pillow	1/1	-	27.3	12.2	-

BASIC DATA SUPPLEMENT 1

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i

ROGUE, UMPQUA WATERSHEDS					
Althouse	c				
Annie Spring	12/30	105	29.4	15.6	14.9
Beaver Dam Creek	12/30	38	9.8	2.5	4.6 ^m
Big Red Mountain	c				
Billie Creek Divide	12/29	50	11.3	5.6	7.3 ^h
Caliban	c				
Champion	12/31	74	30.0	9.7	7.7 ^h
Cold Springs Camp	c				
Cold Springs Camp Pillow	1/1	-	20.7	5.9	-
Deadwood Junction	12/30	31	7.0	1.5	3.3 ^h
Diamond-Crater Summit	12/23	60	17.6	10.7	14.0 ^h
Diamond-Crater Sum. Alt.	12/23	56	16.4	9.0	-
Diamond Lake	12/23	37	9.2	5.4	8.2
Fish Lake	12/31	41	9.6	2.8	5.3 ^m
Fourmile Lake	c			9.4	8.7 ^h
Grayback Peak	c				
Howard Prairie	12/30	32	7.3	2.1	3.2 ^h
Hyatt Prairie Reservoir	12/30	30	7.2	1.2	3.1 ^h
King Mountain #1	12/30	47	14.4	4.1	-
King Mountain #2	12/30	35	8.8	2.5	-
King Mountain #3	12/30	18	5.9	1.0	-
King Mountain #4	12/30	0	0.0	T	-
King Mountain #5	12/30	0	0.0	0.0	-
King Mountain #6	12/30	0	0.0	0.0	-
Little Red Mountain	c				
Mt. Ashland Switchback	c				
Mule Creek	1/4	31	12.5	2.8	-
North Umpqua	12/28	28	7.3	3.3	6.1 ^h
Page Mountain	c				
Park Headquarters	12/30	128	35.8	21.2	21.6
Red Butte #1	12/29	48	12.2	3.8	4.3 ^h
Red Butte #2	12/29	36	9.7	3.6	0.6 ^h
Red Butte #3	12/29	29	6.9	1.7	-
Red Butte #4	12/29	20	2.5	0.8	-
Red Butte #5	12/29	15	1.9	1.2	2.2 ^m
Red Butte #6	12/29	5	0.9	T	-
Seven Lakes #2	c				
Seven Mile	c				
Silver Burn	12/30	48	11.4	3.1	4.4
Siskiyou Summit	12/30	44	11.4	2.2	2.4 ^h
Siskiyou Sum. Alt. #2	12/30	42	11.5	2.1	-
Ski Bowl Road	c				
South Fork Canal	12/30	26	6.0	1.7	1.3
Trap Creek	1/7	31	8.9	2.1	4.1 ^h
Whaleback	c				

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i

KLAMATH WATERSHEDS					
Annie Spring	12/30	105	29.4	15.6	14.9
Beatty (PP&L)	b			0.4	0.2 ^m
Billie Creek Divide	12/29	50	11.3	5.6	7.3 ^h
Bly Mountain	12/28	22	5.8	0.0	2.7 ^h
Bly 101 Ranch (PP&L)	b			0.7	0.7
Chemult	12/28	26	6.9	2.2	4.1
Chiloquin (PP&L)	b			0.6	0.7
Cold Springs Camp	c				
Cold Springs Camp Pillow	1/1	-	20.7	5.9	-
Crazyman Flat ^e	c				
Crowder Flat ^e (Calif.)	c				
Crystal (PP&L)	12/30	42	8.2	1.1	3.5
Diamond-Crater Summit	12/23	60	17.6	10.7	14.0 ^h
Diamond-Crater Sum. Alt.	12/23	56	16.4	9.0	-
Diamond Lake Junction (97)	12/23	20	4.5	1.4	2.0 ^h
Dog Hollow ^e	c				
Finley Corrals ^e	c				
Fort Klamath (PP&L)	12/29	16	3.6	0.6	1.3
Fourmile Lake	c			9.4	8.7 ^h
Gerber	1/4	9	1.8	1.5	1.1 ^h
Harriman (PP&L)	12/31	23	6.5 ^e	1.2	1.3
Hyatt Prairie Reservoir	12/30	30	7.2	1.2	3.1 ^h
Kirk (PP&L)	12/30	23	6.5	2.4	2.8 ^m
Lake of the Woods	12/26	24	6.6	1.4	5.1 ^h
Park Headquarters	12/30	128	35.8	21.2	21.6
Pelican Guard Station	1/2	15	4.0	0.0	1.4 ^h
Quartz Mountain	12/30	23	4.9	1.5	2.4
Quartz Mtn. Extension	12/30	24	4.3	2.0	-
Seven Lakes #2	c				
Seven Mile	c				
State Line ^e (Calif.)	c				
Strawberry	c				
Summer Rim	c				
Summer Rim Pillow	c				
Sun Mountain	12/30	56	13.9	5.8	8.5
Sycan Flat ^e	c				
Taylor Butte	12/31	24	5.5	0.9	2.0 ^h

LAKE COUNTY, GOOSE LAKE WATERSHEDS

Adin Mountain (Calif.)	c				
Bald Mountain (Nev.)	c				
Bear Flat Meadow ^e	c				
Camas Creek	12/31	30	7.3	2.1	3.4 ^m
Cedar Pass (Calif.)	c				
Colvin Creek ^e	c				
Cox Flat ^e	c				
Crowder Flat ^e (Calif.)	c				
Dismal Swamp ^e (Calif.)	c				
Finley Corrals ^e	c				
Hart Mountain ^e	c				
Little Bally Mtn. ^e (Nev.)	c				
Mt. Bidwell (Calif.)	c				
North Star (Calif.)	c				
Patton Meadows ^e	c				
Quartz Mountain	12/30	23	4.9	1.5	2.4
Quartz Mountain (Ext.)	12/30	24	4.3	2.0	-
Sherman Valley ^e	c				
Silver Creek	12/28	16	3.1	0.9	1.4 ^h
State Line ^e (Calif.)	c				
Strawberry	c				
Summer Rim	c				
Summer Rim Snow Pillow	c				
Sycan Flat ^e	c				
Willow Creek ^e	c				

BASIC DATA SUPPLEMENT 1

SNOW

SNOW	THIS YEAR			PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. i
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	12/29	47	10.2	5.8	5.6 ^h
Blue Mtn. Springs Pillow	12/29	29	5.3	- -	- -
Buck Pasture ^e	c				
Buckskin Lake ^e	c				
Call Meadows ^e	c				
Crow Camp ^e	c				
Delintment Lake	c				
Denio Creek ^e	c				
Disaster Peak (Nev.)	c				
Emigrant Butte	c				
Fish Creek	c				
Hart Mountain ^e	c				
Idlewild Camp	12/28	21	4.3	1.2	1.4 ^h
Izee Summit	12/29	23	4.9	2.6	2.7 ^h
Lake Creek R. S.	12/31	32	7.2	3.7	3.6 ^h
Lake Creek (New Tangent)	b			3.9	- -
Oregon Canyon ^e	c				
Rock Spring	12/28	21	4.0	2.1	1.6
Silvies	c				
Snow Mountain	c				
Snow Mountain Pillow	c				
Starr Ridge	12/29	17	3.0	2.3	2.0 ^h
Stinking Water	12/30	19	4.0	1.1	1.3 ^h
Trout Creek ^e	c				
"V" Lake ^e	c				

SNOW

[illegible]

BASIC DATA SUPPLEMENT 2

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average *
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	12/28	13.2	11.7	15.4
Blue Mountain Springs	5900	42	16.9	12/30	10.6	6.6	9.1
Crane Prairie	5375	48	18.2	c		14.7 ^f	15.2
Folly Farm	4450	30	12.5	c		- -	- -
Jack Creek, Lower (Nev.)	6800	48	8.6	c			
Jordan Valley	4390	48	19.3	1/4	15.9	- -	14.6
Mud Flat (Ida.)	5500	48	12.8	c			
Rodeo Flat (Nev.)	6800	42	11.0	12/28	7.4	4.3	10.3
Taylor Canyon (Nev.)	6200	48	15.1	12/28	9.7	9.2	13.2
Triangle (Ida.)	5150	48	16.6	c			
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	c		9.0	9.2
Dooley Mountain	5430	36	9.2	12/28	4.2	2.5	3.7
Emigrant Springs	3925	48	22.3	12/29	20.1	21.2	17.2
Ladd Summit	3730	48	18.9	12/30	10.9	10.1	9.8
Moss Springs	5850	36	25.8	c		14.0	- -
Tollgate	5070	48	23.6	12/29	16.4	14.9	19.7
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/29	12.6	12.4	11.5
Emigrant Springs	3925	48	22.3	12/29	20.1	21.2	17.2
Tollgate	5070	48	23.6	12/29	16.4	14.9	19.7
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/29	12.6	12.4	11.5
Beech Creek	4800	48	21.3	12/29	8.7	8.8	10.9
Blue Mountain Springs	5900	42	16.9	12/30	10.6	6.6	9.1
Blue Mountain Summit	5100	36	16.9	c		9.0	9.2
Derr	5670	24	9.0	c		- -	- -
Marks Creek	4540	36	14.1	12/28	10.9	9.8	10.2
Snow Mountain	6300	48	16.7	c			
Starr Ridge	5150	36	10.6	12/29	10.6	7.8	8.8
Williams Ranch	4500	42	17.9	12/28	17.5	16.6	16.3
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	c		- -	- -
Marks Creek	4540	36	14.1	12/28	10.9	9.8	10.2
Snow Mountain	6300	48	16.7	c			
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	1/2	14.2	14.2	- -
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	12/28	10.4	9.7	10.4

SOIL MOISTURE

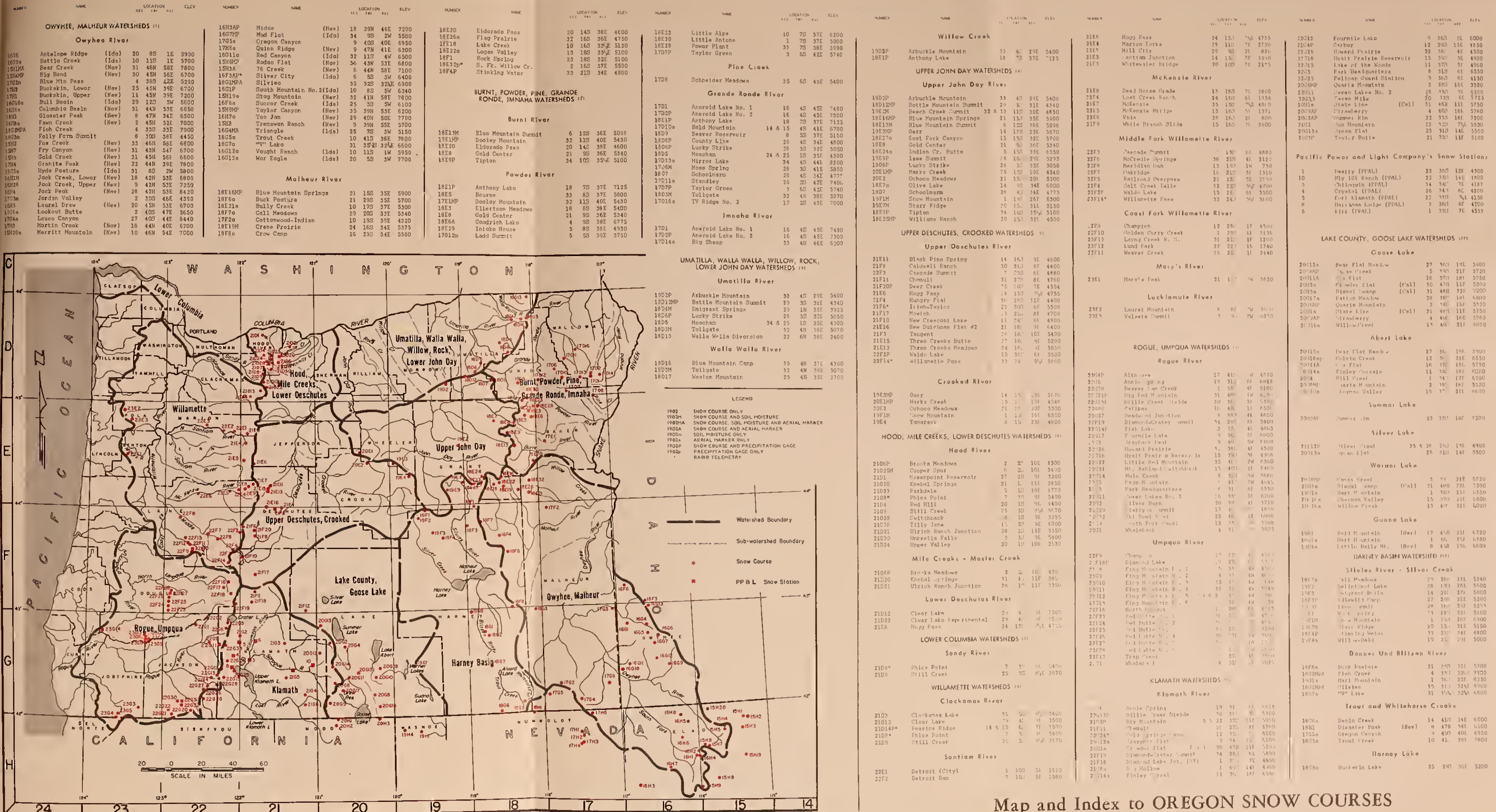
*Average for years of record--for stations with as much as 6 years of record or more.

BASIC DATA SUPPLEMENT 3

PRECIPITATION (Inches)

PRECIPITATION (Inches)		CURRENT INFORMATION		PAST RECORD	
DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	Date of Reading	Precipitation	Last Year	Average †
Anthony Lake (Baker County)	7150	10/5 to 12/29	17.80	6.07	
Camas Creek (Lake County)	5825	12/1 to 12/31	5.90	5.95	
County Line (Umatilla County - Starkey Hqs.)	4800	11/30 to 12/31	2.60	2.10	
Dooley Mountain (Baker County)	5200	10/5 to 12/28	8.50	--	
Granite Mountain (Grant County)	5900	10/5 to 12/28	14.80	--	
Quartz Mountain Summit (Lake County)	5530	11/30 to 12/30	4.77	6.37	
Silver Creek (Lake County)	4900	10/7 to 12/28	9.19	--	





The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

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